SHEET INDEX

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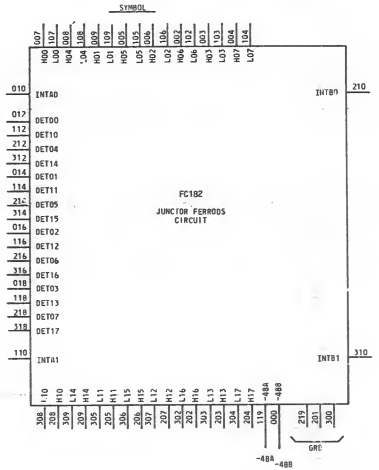
CIRCUIT DESCRIPTION		

SYMBOL

JUNCTOR FERRODS
ELEMENT IDENT
A

TERM.MOD	FUNCT	TERM	LOC
H00	I	007	2A1
H01	I	009	2A3
H02	I	006	2A5
H03	I	003	2A7
H04	I	008	2A2
H05	I	005	2A4
H06	I	002	2A6
H07	I	004	2A7
H10	I	208	2H1
H11	I	205	2H3
H12	I	207	2H5
H13	I	203	2H7
H14	I	209	2H2
H15	I	206	2H4
H16	I	202	2H6
H17	I	204	2H7
INTA0	I	010	2B0
INTA1	I	110	2G0
INTB0	I	210	2B9
INTB1	I	310	2G9
L00	I	107	2A2
L01	I	109	2A3
L02	I	106	2A5
L03	I	103	2A7
L04	I	108	2A3
L05	I	10.	2A4
L06	I	102	2A6
L07	I	104	2A8
L10	I	308	2H1
L11	I	305	2H3
L12	I	307	2H5
L13	I	303	2H6
L14	I	309	2H2
L15	I	306	2H4
L16	I	302	2H6
L17	I	304	2H7
DET00	0	012	2C0
DET01	0	014	2D0
DET02	0	016	2D0
DET03	0	018	2E0
DET04	0	212	2C0
DET05	0	214	2D0
DET06	0	216	2E0
DET07	0	218	2E0
DET10	0	112	2C0
DET11	0	114	2D0
DET12	0	116	2D0
DET13	0	118	2E0
DET14	0	312	2C0
DET15	0	314	2D0
DET16	0	316	2E0
DET17	0	318	2E0

SYMBOL



RECORD OF CHANGES

DWG ISS	PREV FURN	STD	MFR DISC	SEE NOTE

NOTES:

1. UNLESS OTHERWISE SPECIFIED:
   RESISTANCE VALUES ARE IN OHMS
   CAPACITANCE VALUES ARE IN MICROFARADS
   VALUES PRECEDED BY THE SYMBOL + (PLUS) OR − (MINUS) ARE IN VOLTS.
2. POWER AND GROUND TERMINALS FOR INTEGRATED CIRCUITS:

IC CODE	GRD TERM.			

3. BATTERY AND GROUND TERMINALS FOR THIS CIRCUIT PACK ARE AS FOLLOWS:

FUNCTION	TERMINAL
GROUND	219, 201, 900
−48A	119
−48B	000

4. HORIZONTAL MOUNTING CENTER ARE 0.75 IN
5. ⏚ GROUND RETURN

DWG ISSUE	DATE ISSUE	DRAWN	APPD
1	8-14-75	LRE	ELL
		LRE	LEG
241	10-22-76	AS	RFG
		LRE	RLB
			EN
			RPG

SYSTEM USED ON	DESIGN CONTROL
NO. 3 ESS	IH

CURRENT DRAIN:

SHEET INDEX NOTES

1. FOR SINGLE REISSUES, A CHANGED OR NEW SHEET WILL BE ASSIGNED THE SAME ISSUE NUMBER AS SHEET 1.
2. FOR CONCURRENT REISSUES, A CHANGED OR NEW SHEET WILL BE ASSIGNED THE HIGHEST ISSUE NUMBER AFFECTING THAT SHEET.
3. THE ISSUE NUMBER OF SHEET 1 IS RECOGNIZED AS THE ISSUE NUMBER OF THE WHOLE DRAWING.

SUPPORTING INFORMATION

CATEGORY	NUMBER
CONNECTOR ON FRAME	947A, 947C, OR 947E
CIRCUIT PACK INFORMATION DRAWING	.
SERIES FOR LATEST CLASS "A" CHANGE	
ACCEPTABLE SERIES	2

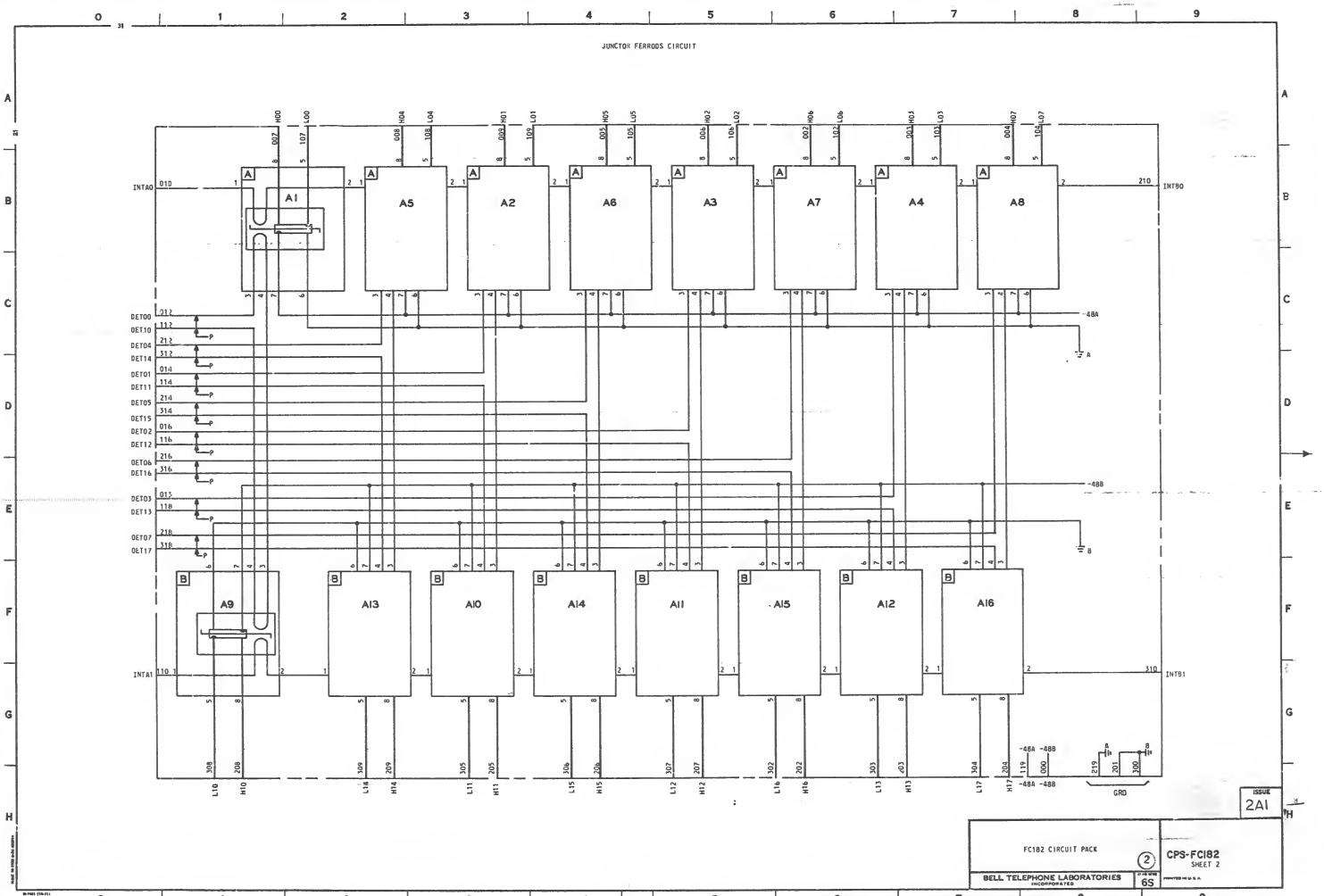
1T11

FC182 CIRCUIT PACK
JUNCTOR FERROD CIRCUIT

AT&TCO STANDARD

(2) DWG SIZE 6S ISSUE 2A1

BELL LABORATORIES CPS-FC182 3 SHEETS


JUNCTOR FERRODS CIRCUIT
INTA0
INTB0
INTA1
INTB1
A1
A5
A2
A6
A3
A7
A4
A8
A9
A13
A10
A14
A11
A15
A12
A16
-48A
-48B
GRD
FC182 CIRCUIT PACK
BELL TELEPHONE LABORATORIES
INCORPORATED
CPS-FC182
SHEET 2
ISSUE
2A1

COMPONENT LIST

FERROD SENSOR

DESIG	LOC	CODE
A1	2B1	2B
A2	2B3	
A3	2B4	
A4	2B6	
A5	2B2	
A6	2B4	
A7	2B5	
A8	2B7	
A9	2F0	
A10	2F2	
A11	2F4	
A12	2F6	
A13	2F2	
A14	2F3	
A15	2F5	
A16	2F7	2B

CIRCUIT DESCRIPTION

PURPOSE OF CIRCUIT

THIS CIRCUIT PROVIDES 16 FERROD SCAN POINT ELEMENTS WHICH ARE USED IN THE NO. 3 ESS JUNCTOR AND JUNCTOR CONTROL UNIT, SD3K200-01.

THE FC182 FERROD CIRCUIT PACK HAS 16 FERRODS (TYPE 2B) MOUNTED TO FORM A 2-BY-8 MATRIX. THE INTERROGATE WINDINGS OF THE (EIGHT) FERRODS WHICH FORM A HALF ROW ARE CONNECTED IN SERIES AND THE READOUT WINDINGS OF EACH FERROD IN ONE HALF ROW IS CONNECTED IN SERIES WITH THE READOUT WINDINGS OF THE CORRESPONDING FERROD IN THE OTHER HALF ROW. ALL CONTROL WINDINGS OF THE FERRODS ON THE FC182 FERROD PACK ARE ARRANGED INTERNALLY IN THE BATTERY AND GROUND CONFIGURATION.

IN THE BATTERY AND GROUND CONFIGURATION, THE -48 V BATTERY AND GROUND ARE SUPPLIED THROUGH THE FERROD CONTROL WINDINGS TO THE USING CIRCUIT. RESISTORS TO LIMIT THE CURRENT IN THE CONTROL WINDINGS MUST BE PROVIDED BY THE USING CIRCUIT.

FUNCTIONAL DESCRIPTION

THE FERROD IS THE BASIC SCAN ELEMENT OF A SCANNER. IT CAN BE CONSIDERED A 2-WINDING TRANSFORMER WHOSE COUPLING (THE ABILITY TO INDUCE A SIGNAL FROM THE PRIMARY WINDING TO THE SECONDARY WINDING) IS CONTROLLED BY THE AMOUNT OF CURRENT IN THE CONTROL WINDINGS. THE PRIMARY AND SECONDARY WINDINGS OF THE TRANSFORMER ARE ASSOCIATED WITH THE INTERROGATE AND READOUT WINDINGS, RESPECTIVELY.

ISSUE 2A1

FC182 CIRCUIT PACK

BELL TELEPHONE LABORATORIES INCORPORATED

2

CPS-FC182 SHEET 3

6S

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